WHAT IS CLAIMED IS:

1. A method of preparing a sequence of signal samples for transmission, comprising the step of:
for each occurrence of two consecutive equivalent samples, replacing the second-occurring equivalent sample with synchronization information.

2. A method of transmitting an incoming sequence of signal samples, comprising the steps of:
for each of said incoming samples,
(i) transmitting said sample if said sample is not equivalent to an immediately preceding sample, or
(ii) transmitting a synchronization pattern if said sample is equivalent to the immediately preceding sample.

3. A method of transmitting an input stream of signal samples with synchronization information, comprising the steps of:
sequentially monitoring said samples to detect a match condition characterized by the equivalence of two consecutive samples;
if a match condition is detected, substituting the second-occurring equivalent sample with a synchronization pattern.

4. The method as recited in claim 3 wherein said substitution step occurs in real time.

5. A system for transmitting a sequence of signal samples received from an input bus, comprising:

storage means coupled to said input bus for temporarily storing samples;

sample comparison means coupled to said storage means for comparing each sample with the immediately preceding sample, and generating a match signal when said sample is equivalent to the preceding sample;

output means coupled to said storage means and said comparison means for transmitting each sample in the absence of a match signal, and transmitting a synchronization pattern in the presence of a match signal.

A2

6. A method of transmitting an incoming sequence of signal samples and receiving the transmitted samples, comprising the steps of:

for each of said incoming samples,

(i) transmitting said sample if said sample is not equivalent to an immediately preceding sample, or

(ii) transmitting a synchronization pattern if said sample is equivalent to the immediately preceding sample;

monitoring said transmissions at a receiving end to detect the occurrence of said synchronization pattern; and

outputting a received sample when a synchronization pattern is not detected, and outputting the immediately previous received sample when a synchronization pattern is detected.

~~7. A system for transmitting an incoming sequence of~~ signal samples and receiving the transmitted samples, comprising:

transmit means for monitoring said sequence of signal samples, transmitting a sample if said sample is not equivalent to an immediately preceding sample, and transmitting a synchronization pattern if said sample is equivalent to the immediately preceding sample;

receive means, coupled to receive said transmission, for outputting a received sample when a synchronization pattern is not detected, and outputting the immediately previous received sample when a ~~synchronization pattern is detected.~~

A2